FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION
(please fill in the highlighted areas)

I. APPLICANT INFORMATION

A. Applicant Name: Montana Fish, Wildlife & Parks

B. Mailing Address: 1420 East Sixth Ave

C. City: Helena State: MT Zip: 59601

Telephone: (406) 444-2535

D. Contact Person: Linnaea Schroeer

Address if different from Applicant: same

Telephone: (406) 444-3378

E. Landowner and/or Lessee Name (if other than Applicant): Jim Lind

Mailing Address: PO Box 563

City: White Sulphur Springs State: MT Zip: 59645

Telephone: (406) 547-3840

II. PROJECT INFORMATION*

A. Project Name: Lind Ranch Riparian Fencing Project II

River, stream, or lake: North Fork Smith River

Location: Township 09N Range 07E Section 7

County: Meagher

B. Purpose of Project:

To improve fish habitat and water quality in the North Fork of the Smith River.

C. Brief Project Description:

The North Fork of the Smith River (34.4 miles) originates in the Little Belt Mountains and flows southwest, eventually joining with the South Fork of the Smith to form the mainstem just west of the town of White Sulphur Springs. Besides the headwaters, which lie on US Forest Service property, land use along the North Fork is predominantly grazing and hay production.

This project would be implemented on property belonging to Jim and Della Lind, located on the eastern edge of White Sulphur Springs. The North Fork flows west through their parcel, which is used for late fall grazing, winter feeding, and spring calving grounds for beef cattle. Livestock have historically had unrestricted access to the stream during these times, which has resulted in bank erosion, increased sediment load to the river, and low willow recruitment and survival.

In the spring of 2010 staff from FWP planted approximately 200 young willows along eroding sections of the North Fork, and that summer erected three sections of temporary electric fencing around the willows and eroding stream sections. The temporary fences worked well overall, although there were some issues with the alligator clips coming off of the fence wire, and a complete break in the wire occurred in one of the sections. One time during a particularly heavy snowfall the solar generator was completely covered and unable to produce power. Cattle did come into the exclosures during a couple of those breaks in power and browsed on the young willows to varying severity.

After consideration, Mr. Lind is now interested in having permanent electric fence installed along both sides of a 0.8-mile section of the North Fork. The proposed riparian fence would consist of approximately1.25 miles of electric fence, five gates, and two stream crossings. The fence would closely follow the river for much of its length, except in the most sinuous sections, where the fence would stretch from meander bend to meander bend, and the enclosed pastures would be accessible by a gate and therefore be available for haying and late-fall grazing. These riparian pastures would not be grazed for 3-4 years following the installation of the fence to allow planted willows time to establish themselves. The landowner will closely monitor the grazing of these riparian pastures and remove cattle after the majority of grass forage has been grazed but before the willows are targeted.

Permanently fencing the stream will allow willows and other riparian vegetation to become reestablished in currently denuded areas, and will reduce hoof shear by livestock. Healthier, more robust riparian vegetation will decrease bank erosion, provide shade and cover for fish, decrease water temperature, and provide additional food sources for aquatic invertebrates and fish.

The project will benefit the landowner by decreasing stream bank erosion and by increasing the ecological integrity of his land.

The completion of this project would be an important step in the Department's long-term goal of protecting and improving the fishery in the Smith River, which has been suffering from increased water temperatures and decreased stream flows in the past 12 years. It is believed that detrimental effects of drought, global warming, and dewatering can be partially mitigated through better management and protection of the stream in its upper watershed.

D. Length of stream or size of lake that will be treated: 0.8 miles

E. Project Budget:

Grant Request (Dollars): $ 11,066.20

Contribution by Applicant (Dollars): $ 0 In-kind $
(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): $ 7,000 In-kind $ 140.00
(attach verification - See page 2 budget template)

Total Project Cost: $ 18,206.20

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support, and/or other information necessary to evaluate the merits of the project.

Please see specific project plans in Attachment 1.

Partial funding for this project has been secured from the Smith River Corridor Enhancement Acount, which is administered by Montana FWP. The fund was established as a result of HB 312 during the 2005 legislature session and gets a small percentage ($50 from each outfitted client fee and 5% of private floater feels) of Smith River permits.

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

This project will primarily benefit brown trout, rainbow trout, and mountain whitefish.

B. How will the project protect or enhance wild fish habitat?:

This project would enhance wild fish habitat by excluding livestock from having unrestricted access to this section of the North Fork. By fencing livestock out of eroded stream sections, riparian vegetation such as sedges and willows will have an opportunity to become reestablished in denuded areas. A more robust riparian community would bind banks together and reduce erosion, which improves spawning habitat and helps lower water temperatures. Riparian vegetation also shades the stream channel, which provides cover for fish, lowers water temperature, and provides habitat for terrestrial insects which are part of the aquatic food chain.

C. Will the project improve fish populations and/or fishing? To what extent?:

It is expected that an improvement in habitat would result in an increase in fish populations with the North Fork of the Smith, but that is not assured. Other factors such as drought and disease play large roles in determining the size of fish populations. However, it has been demonstrated that habitat restoration and enhancement efforts can help mitigate damage to fish populations during times of drought or other environmental stressors.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

The landowner allows public fishing with permission and has indicated his intention to continue to do so. However, most of the benefit to the public would come from downstream use on the mainstem.

E. If the project requires maintenance, what is your time commitment to this project?:

The landowner, Jim Lind, has agreed to maintain the fence and other physical aspects of the project. However, the applicant is available to help as needed.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

The major cause of habitat degradation along this section of stream is from long-term unrestricted access by livestock. Fencing this section of stream is expected to correct the cause.

G. What public benefits will be realized from this project?:

It is hoped that this project and others like it will improve water quality in the North Fork and therefore ultimately in the Smith River, which is a highly prized fishery. Cooler water temperatures in the North Fork will lead to cooler temperatures in the main stem of the Smith, and could provide areas of refugia for Smith River fish in times of drought and high temperatures.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No.

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No.

J. Is this project associated with the reclamation of past mining activity?:

No.

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: _____ Date: _____

Sponsor (if applicable): _____

***Highlighted boxes will automatically expand.**

ATTACHMENT 1

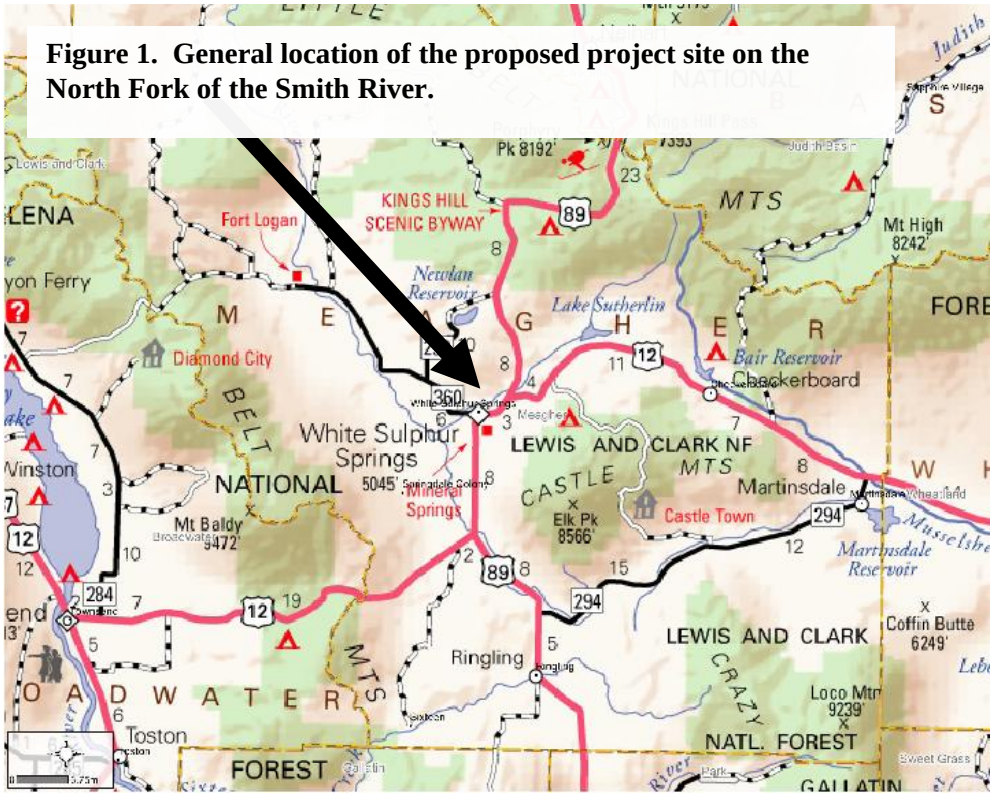

Figure 1. General location of the proposed project site on the North Fork of the Smith River.

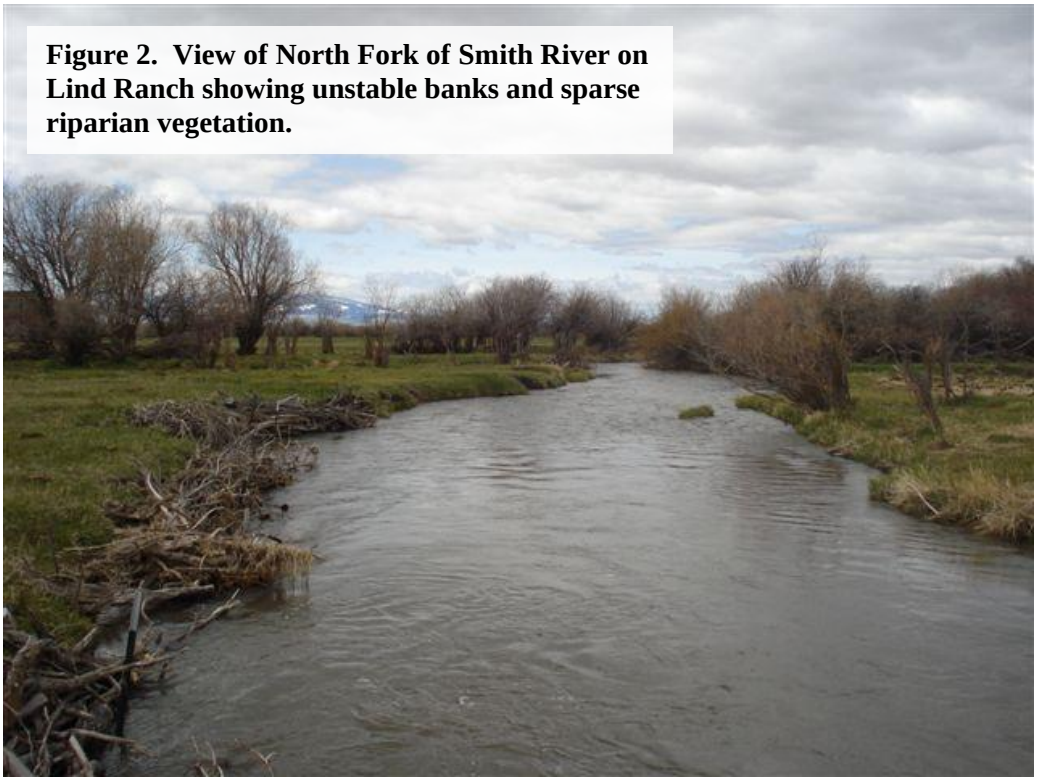

Figure 2. View of North Fork of Smith River on Lind Ranch showing unstable banks and sparse riparian vegetation.

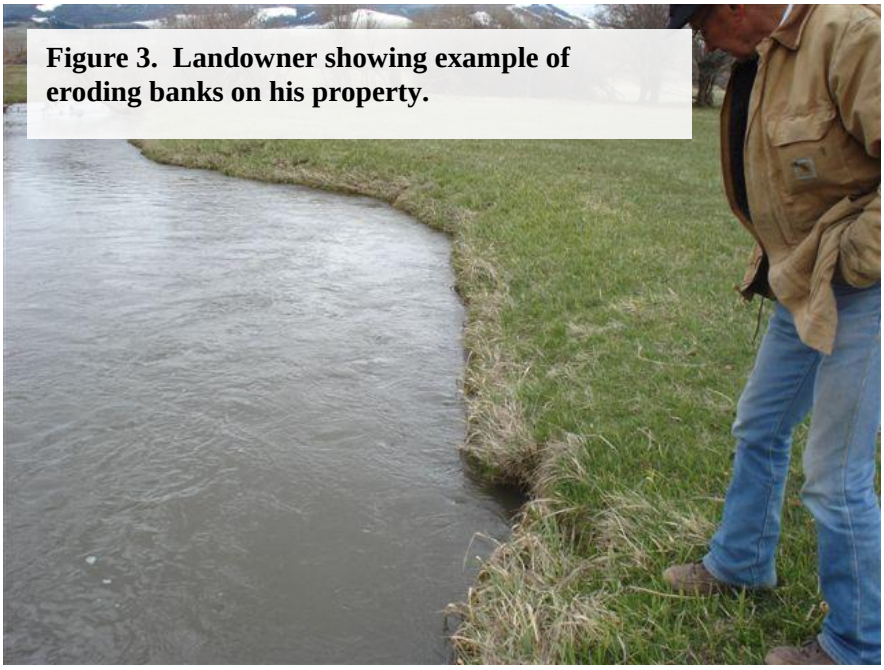

Figure 3. Landowner showing example of eroding banks on his property.

Specific Project Plans

The plan is to install 1.3 miles of permanent electric fence along both sides of a 0.8 mile long section of the North Fork of the Smith on property belonging to Jim and Della Lind (see Figure 4). The electric fence would be a three-strand high-tensile design, powered by a solar generator. The distance from the stream to the fence will be variable, depending on vegetation, terrain, and ease of installation, but will generally correspond to the map shown below. Two stream crossings and 5 gates would also be included.

The fencing design includes two riparian pastures, which will be utilized for hay and grazing. Those pastures will be hayed as usual without any change, and the pastures will be rested from grazing for three years after installation of the fence and then be utilized for a brief period in the late fall of every year. If it appears that livestock are damaging riparian vegetation too severely during those times, FWP staff will work with the landowner to come up with a workable solution, such as installing temporary electric fencing during those rotations or keeping the cattle out for a longer period of time.

The fenced-out areas would also be sprigged with a mixture of willow cuttings from local stock and rooted sprigs from the State Nursery. Labor for planting the cuttings and seedlings would be provided by FWP staff and possibly some volunteers from local sporting groups.

Administration

The purchasing and contracting aspects of this project would follow guidelines set forth in the Montana Fish, Wildlife and Parks Purchasing and Property Section and Design and Construction Bureau.

Monitoring

Monitoring is important in evaluating the success of projects like this. The applicant will collect pre and post treatment photo points at established benchmark sites; and record trout abundance counts by electrofishing, and redd counts.

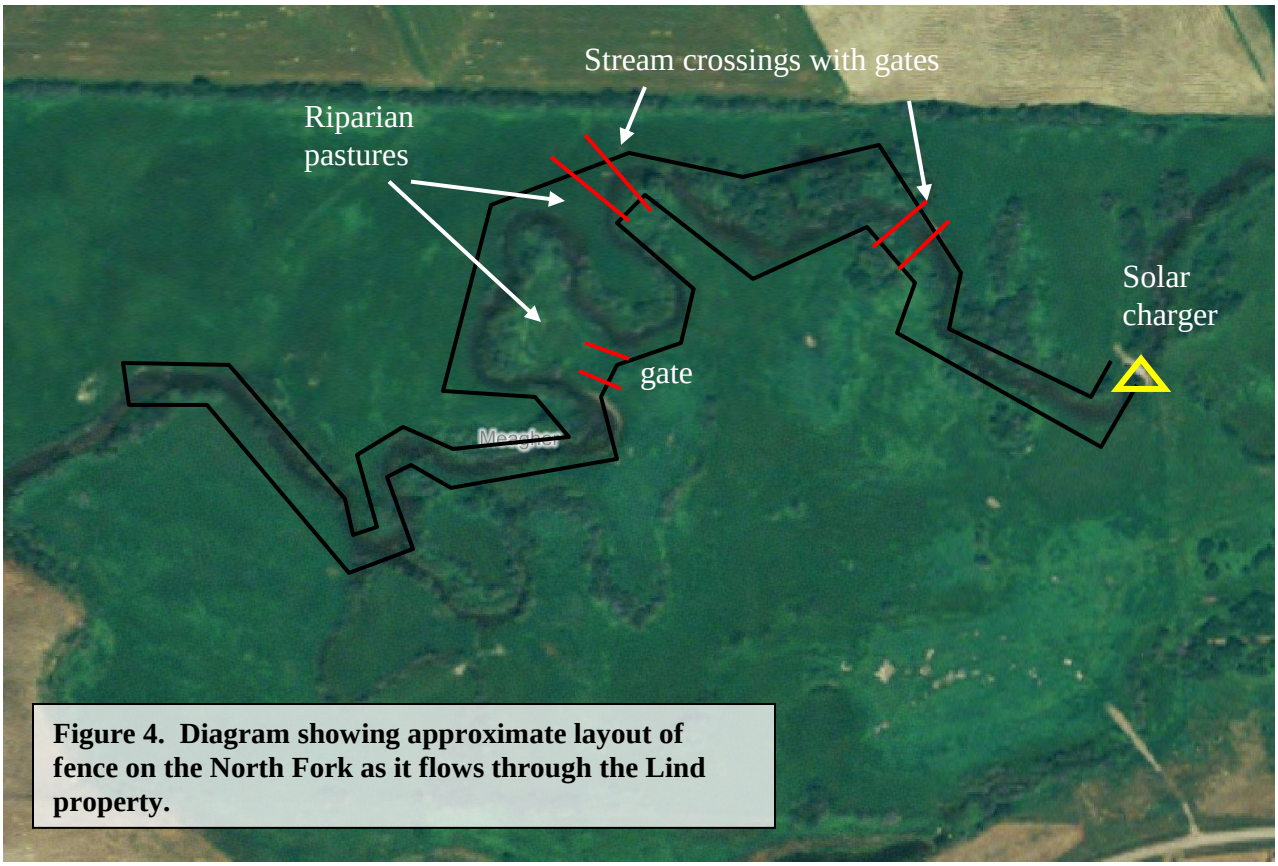

Figure 4. Diagram showing approximate layout of fence on the North Fork as it flows through the Lind property.